

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An exhaust gas processing device comprising, in order from the upstream side of an exhaust gas flow direction, at least a nonleak-type gas-gas heater heat recovery unit, an absorption tower, a mist eliminator, and a nonleak-type gas-gas heater reheater for circulating a heat medium with respect to the nonleak-type gas-gas heater heat recovery unit arranged in a duct for exhaust gas discharged from a fire furnace, wherein

a heat suppression device for suppressing dissipated heat from the nonleak-type gas-gas heater reheater is arranged in an exhaust gas duct between the mist eliminator and nonleak-type gas-gas heater reheater, the heat suppression device comprising ~~one or more of the following configurations:~~ (a) a configuration wherein the exhaust gas duct between the mist eliminator and the nonleak-type gas-gas heater reheater is provided with a blow-off device configured to discharge heated gas from the inside of the exhaust gas duct to the outside of the exhaust gas duct; and

~~(b) a configuration wherein a thermometer for measuring ambient air temperature of the inside of the exhaust gas duct is located in the exhaust gas duct between the mist eliminator and the nonleak-type gas-gas heater reheater, and a spray nozzle pipeline for washing at least one of an element of the mist eliminator and an exhaust gas duct inner wall surface and the periphery thereof with a washing liquid, which is activated when the thermometer reads a temperature greater than or equal to a set temperature, and an~~

~~opening/closing valve of this pipeline are arranged at, of a front surface side and a rear surface side of the mist eliminator, at least the front surface side.~~

2. (Currently Amended) The exhaust gas processing device as set forth in Claim 1, wherein a steam-gas heater is provided in the exhaust gas duct between the mist eliminator and the nonleak-type gas-gas heater reheater, and a heat suppression device for suppressing dissipated heat from the steam-gas heater is provided in the exhaust gas duct between the mist eliminator and the steam-gas heater.

3-4. (Canceled).

5. (Currently Amended) The exhaust gas processing device as set forth in Claim 1, wherein the absorption tower is a two-chamber-type absorption tower provided with

- (a) a circulation tank for retaining of an absorption liquid, and
- (b) spray nozzles in respective regions, while an inlet duct for introducing exhaust gas discharged from a combustion device such as a boiler in ~~almost~~ a generally horizontal direction and an outlet duct for discharging exhaust gas in ~~almost~~ a generally horizontal direction are provided above ~~this~~ the circulation tank, an exhaust gas channel is provided between the inlet duct and outlet duct, a partition plate ~~stood~~ extending in a vertical direction having an opening portion at a ceiling portion side to divide ~~this~~ the exhaust gas channel into two chambers of an inlet duct side and an outlet duct side is provided, and an ascending current region where exhaust gas introduced from the inlet duct flows upward and a descending current region where exhaust gas flows downward toward the outlet duct after reversing at the opening portion of the ceiling

side are formed by ~~this~~ the partition plate, so that an ejecting absorption liquid slurry makes countercurrent contact with exhaust gas in the ascending current region and makes parallel-current contact in the descending current region.

6-7. (Canceled).

8. (Previously Presented) A method for using an exhaust gas processing device including, in order from the upstream side of an exhaust gas flow direction, at least a nonleak-type gas-gas heater heat recovery unit, an absorption tower, a mist eliminator, and a nonleak-type gas-gas heater reheater for circulating a heat medium with respect to the heat recovery unit arranged in a duct for exhaust gas discharged from a fire furnace, wherein a heat suppression device for suppressing dissipated heat from the nonleak-type gas-gas heater reheater is arranged in an exhaust gas duct between the mist eliminator and nonleak-type gas-gas heater reheater, the method comprising activating the heat suppression device to suppress dissipated heat from the nonleak-type gas-gas heater reheater generated during a shutdown of the adsorption tower.

9. (Previously Presented) A method for using an exhaust gas processing device including, in order from the upstream side of an exhaust gas flow direction, at least a nonleak-type gas-gas heater heat recovery unit, an absorption tower, a mist eliminator, and a nonleak-type gas-gas heater reheater for circulating a heat medium with respect to the heat recovery unit arranged in a duct for exhaust gas discharged from a fire furnace, wherein a heat suppression device for suppressing dissipated heat from the nonleak-type gas-gas heater reheater is arranged in an exhaust gas duct between the mist eliminator and nonleak-type gas-gas heater reheater, the

method comprising measuring a temperature of inner ambient air of the exhaust gas flow passage between the mist eliminator and the nonleak-type gas-gas heater reheater, and then washing the element of the mist eliminator and the periphery thereof when the measured temperature becomes greater or equal to a set value during a shutdown of the adsorption tower.

10. (Currently Amended) The exhaust gas processing device as set forth in Claim 1, wherein the heat suppression device further comprises at least one of the following:

a configuration having a thermometer to measure ambient air temperature of the inside of the exhaust gas duct provided in the exhaust gas duct between the mist eliminator and the nonleak-type gas-gas heater reheater, and a spray nozzle pipeline with an opening/closing valve to wash at least one of an element of the mist eliminator and an exhaust gas duct inner wall surface, and the periphery thereof with a washing liquid, the opening/closing valve of the spray nozzle pipeline being activated when the thermometer reads a temperature greater than or equal to a set temperature, the spray nozzle pipeline being provided at at least one of a front surface and a rear surface of the mist eliminator, the front surface of the mist eliminator being contacted by exhaust gas before the rear surface of the mist eliminator is contacted by the exhaust gas; and

a configuration wherein at least one of a heat-resistant resin material and a corrosion preventive lining material resistant to dissipated heat from the nonleak-type gas-gas heater reheater during a shutdown of the absorption tower is provided on at least one of an element of the mist eliminator, an absorption tower outlet duct, an exhaust gas duct between the absorption tower and mist eliminator, and an exhaust gas duct between the mist eliminator and the nonleak-type gas-gas heater reheater.

11. (Currently Amended) The exhaust gas processing device as set forth in claim 2, wherein the heat suppression device further comprises at least one of the following:

a configuration having a thermometer to measure ambient air temperature of the inside of the exhaust gas duct provided in the exhaust gas duct between the mist eliminator and the nonleak-type gas-gas heater reheater, and a spray nozzle pipeline with an opening/closing valve to wash at least one of an element of the mist eliminator and an exhaust gas duct inner wall surface, and the periphery thereof with a washing liquid, the opening/closing valve of the spray nozzle pipeline being activated when the thermometer reads a temperature greater than or equal to a set temperature, the spray nozzle pipeline being provided at at least one of a front surface and a rear surface of the mist eliminator, the front surface of the mist eliminator being contacted by exhaust gas before the rear surface of the mist eliminator is contacted by the exhaust gas; and

a configuration wherein at least one of a heat-resistant resin material and a corrosion preventive lining material resistant to dissipated heat from the nonleak-type gas-gas heater reheater during a shutdown of the absorption tower is provided on at least one of an element of the mist eliminator, an absorption tower outlet duct, an exhaust gas duct between the absorption tower and mist eliminator, and an exhaust gas duct between the mist eliminator and the nonleak-type gas-gas heater reheater.